IN THE CLAIMS

Please cancel Claims 12, 16-20 and 53-56 without prejudice.

Please also cancel claims 37-39, 42, 43 and 45-49 without prejudice, as being drawn to non-elected species.

Please amend Claims 1-11, 13, 14, 21-36, 40, 44, 50 and 52 as follows:

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1. (Amended) A flow-through device for capturing a target nucleic acid comprising a three-dimensional porous substrate having immobilized thereon a capture polynucleotide which is capable of hybridizing to the target nucleic acid, wherein said porous substrate is about 1 mm to 20 mm thick.

2. (Amended) The flow-through device of [Claim 1,] Claim 57, 58, 59 or 60 in which said porous substrate is about 1 mm to 20 mm thick.

3. (Amended) The flow-through device of Claim 1, 57, 58 or 59 in which said porous substrate has an average pore size of about 1 μm to about 250 μm.

4. (Amended) The flow-through device of Claim 1, 57, 58, 59 or 60 in which said porous substrate has immobilized thereon about 2×10^{-19} to 2×10^{-15} nmol/nm^2 of said capture polynucleotide.

5. (Amended) The flow-through device of Claim 1, 58, 59 or 60 in which said capture polynucleotide is covalently attached to the porous substrate.

6. (Amended) The flow-through device of Claim 1, 58, 59 or 60 in which said capture polynucleotide is covalently attached to the porous substrate *via* a phosphodiester, phosphorothioate or phosphoramidate linkage.

7. (Amended) The flow-through device of Claim 1, 58, 59 or 60 in which said capture polynucleotide is covalently attached to the porous substrate *via* a carboxyamide linkage.

8. (Amended) The flow-through device of Claim 1, ~~57, 58, 59 or 60~~ in which said capture polynucleotide is covalently attached to the porous substrate *via* a linker.

9. (Amended) The flow-through device of Claim 1, 57, 59 or 60 in which said porous substrate is composed of glass or a polymeric material selected from the group consisting of polyethylene, polystyrene, polycarbonate and polypropylene.

10. (Amended) The flow-through device of Claim 1, 57, 58, 59 or 60 in which said porous substrate is composed of high density or high molecular weight polyethylene.

11. (Amended) The flow-through device of Claim 1, 57, 58 or 60 in which said porous substrate has a void volume in the range of about 1 $\mu l/cm^2$ to about 100 $\mu l/cm^2$.

13. (Amended) The flow-through device of Claim 1, 57, 58 or 59 in which the porous substrate has a porosity in the range of about 25 to 80%.

14. (Amended) The flow-through device of Claim 1, 57, 58, 59 or 60 in which the capture polynucleotide is covalently immobilized on the porous substrate via its 5'- or 3'-terminal residue.

21. (Amended) [An apparatus for capturing a target nucleic acid from a sample comprising a housing having disposed therein a] The flow-through device according to Claim 1, 57, 58, 59 or 60 further comprising a housing in which the three-dimensional porous substrate is disposed.

In Claim 22, insert a comma between "a spin column" and "a microchannel".

23. (Amended) A method of capturing a target nucleic acid from a sample, said method comprising [the step of:

(i)] flowing a sample containing or suspected of containing a target nucleic acid through a [three-dimensional porous substrate having immobilized thereon a capture

polynucleotide capable of hybridizing to the target nucleic acid] flow-through device according to Claim 1 under conditions wherein said target nucleic acid and capture polynucleotide hybridize to one another to form a hybridized complex, thereby capturing the target nucleic acid.

24. (Amended) The method of Claim 23, 61, 62, 63 or 64 in which said target nucleic acid is applied to said [porous substrate] flow-through device under conditions of high stringency.

25. (Amended) The method of Claim 23, 61, 62, 63 or 64 in which said target nucleic acid is applied to said [porous substrate] flow-through device under conditions of low stringency.

26. (Amended) The method of Claim 23, 61, 62, 63 or 64 in which said target nucleic acid is applied to the [porous substrate] flow-through device under conditions wherein it hybridizes with said capture polynucleotide in less than one minute.

27. (Amended) The method of Claim 23, 61, 62, 63 or 64 in which said porous substrate of said flow-through device has an average pore size of about 1 μm to about 250 μm.

28. (Amended) The method of Claim 23, 61, 62, 63 or 64 in which the density or surface concentration of said capture polynucleotide is about 2 X 10^{-19} to 2 X 10^{-15} nmole/nm^2.

29. (Amended) The method of Claim 23, 62, 63 or 64 in which said capture polynucleotide is covalently attached to the porous substrate of the flow-through device.

30. (Amended) The method of Claim 23, 62, 63 or 64 in which said capture polynucleotide is covalently attached to the porous substrate of the flow-through device *via* a phosphodiester, phosphorothioate or phosphoramidate linkage.

31. (Amended) The method of Claim 23, 62, 63 or 64 in which said capture polynucleotide is covalently attached to the porous substrate of the flow-through device *via* a carboxyamide linkage.

32. (Amended) The method of Claim 23, 61, 62, 63 or 64 in which said capture polynucleotide is covalently attached to the porous substrate of the flow-through device *via* a linker.

33. (Amended) The method of Claim 23, 61, 63 or 64 in which said porous substrate of said flow-through device is composed of glass or a polymeric material selected from the group consisting of polyethylene, polystyrene, polycarbonate and polypropylene.

34. (Amended) The method of Claim 23, 61, 62, 63 or 64 in which said porous substrate of said flow-through device is composed of high density or high molecular weight polyethylene.

35. (Amended) The method of Claim 23, 61, 62, 63 or 64 in which said porous substrate of said flow-through device has a void volume in the range of 0.1 $\mu l/cm^2$ to about 100 $\mu l/cm^2$.

36. (Amended) The method of Claim 23, 61, 62, 63 or 64 which further includes the step of washing said hybridized complex under conditions of moderate or high stringency.

40. (Amended) A method of determining whether a sample contains a target nucleic acid, said method comprising the steps of:

[(c)](a) flowing a sample suspected of containing a target nucleic acid through a [three-dimensional porous substrate a capture polynucleotide capable of hybridizing to the target nucleic acid attached thereto] flow-through device according to Claim 1, 57, 58, 59 or 60 under conditions wherein the target nucleic acid and [target] capture polynucleotide hybridize; and

[(d)][(b)] detecting the presence of hybrids, wherein a positive detection indicates the presence of the target nucleic acid in the sample.

44. (Amended) A kit for capturing a target nucleic acid of interest from a sample, comprising:

a) a [three-dimensional porous substrate having immobilized thereon a capture polynucleotide capable of hybridizing to said target nucleic acid] flow-through device according to Claim 1, 57, 58, 59 or 60; and

b) a housing into which the [porous substrate] flow-through device can be disposed.

50. (Amended) A kit for capturing a target nucleic acid from a sample comprising:

a) a three-dimensional porous substrate [activated with about $6x10^{-17}$ to $9x10^{-15}$ nmol/nm^2 of a reactive group] having an average pore size of about 1 µm to about 250 µm and a porosity in the range of 25% to 80%; and

b) a capture polynucleotide capable of being covalently attached to the porous substrate.

52. (Amended) A kit for capturing a target nucleic acid from a sample comprising:

a) a three-dimensional porous substrate [capable of being activated with about $6x10^{-17}$ to $9x10^{-15}$ nmol/nm^2 of a reactive group] having an average pore size of about 1 µm to about 250 µm and a porosity in the range of 25% to 80%; and

b) means for generating a capture polynucleotide which is capable of hybridizing to the target nucleic acid and which is capable of being covalently attached to the porous substrate.

Please add the following new claims:

--57. (New) A flow-through device for capturing a target nucleic acid comprising a three-dimensional porous substrate having immobilized thereon a capture polynucleotide which is capable of hybridizing to the target nucleic acid, wherein said capture polynucleotide

is covalently attached to the porous substrate *via* a phosphodiester, phosphorothioate or phosphoramidate linkage.

58. (New) A flow-through device for capturing a target nucleic acid comprising a three-dimensional porous substrate having immobilized thereon a capture polynucleotide which is capable of hybridizing to the target nucleic acid, wherein said porous substrate is composed of glass or a polymeric material selected from the group consisting of polyethylene, polystyrene, polycarbonate and polypropylene.

59. (New) A flow-through device for capturing a target nucleic acid, comprising a three-dimensional porous substrate having immobilized thereon a capture polynucleotide which is capable of hybridizing to the target nucleic acid, wherein said porous substrate has a void volume in the range of about 1 $\mu l/cm^2$ to about 100 $\mu l/cm^2$.

60. (New) A flow-through device for capturing a target nucleic acid, comprising a three-dimensional porous substrate having an average pore size of about 1 μm to about 250 μm and a porosity in the range of about 25 to 80% and having immobilized thereon a capture polynucleotide capable of hybridizing to the target nucleic acid.

61. (New) A method of capturing a target nucleic acid from a sample, said method comprising flowing a sample containing or suspected of containing a target nucleic acid through a flow-through device according to Claim 57 under conditions wherein said target nucleic acid and capture polynucleotide hybridize to one another to form a hybridized complex, thereby capturing the target nucleic acid.

62. (New) A method of capturing a target nucleic acid from a sample, said method comprising flowing a sample containing or suspected of containing a target nucleic acid through a flow-through device according to Claim 58 under conditions wherein said target nucleic acid and capture polynucleotide hybridize to one another to form a hybridized complex, thereby capturing the target nucleic acid.

63. (New) A method of capturing a target nucleic acid from a sample, said method comprising flowing a sample containing or suspected of containing a target nucleic acid through a flow-through device according to Claim 59 under conditions wherein said target nucleic acid and capture polynucleotide hybridize to one another to form a hybridized complex, thereby capturing the target nucleic acid.

64. (New) A method of capturing a target nucleic acid from a sample, said method comprising flowing a sample containing or suspected of containing a target nucleic acid through a flow-through device according to Claim 60 under conditions wherein said target nucleic acid and capture polynucleotide hybridize to one another to form a hybridized complex, thereby capturing the target nucleic acid.

65. (New) The kit of Claim 50 or 51 in which the porous substrate is activated with about 6 X 10^{-17} to 9 X 10^{-15} nmol/nm^2 of a reactive group.

66. (New) The kit of Claim 50 or 51 in which the porous substrate is composed of glass or a polymeric material selected from the group consisting of polyethylene, polystyrene, polycarbonate and polypropylene.

67. (New) The kit of Claim 66 in which the porous substrate is composed of high density or high molecular weight polyethylene.--

REMARKS

Applicants note with appreciation the Examiner's acknowledgment that Claims 2, 6, 9, 10, 11, 13 and 19 recite allowable subject matter. With this Amendment, Applicants have redrafted certain of these allowable claims in independent form, canceled Claims 12, 17-20, 37-39, 42, 43, 45-49 and 53-56 without prejudice and added new Claims 57-67. In addition, Applicants have amended Claims 2-11, 13, 14, 21-36, 40, 44, 50 and 52 to depend from claims reciting subject matter the Examiner designated as allowable. Thus, after entry of this Amendment Claims 1-11, 14, 15, 19-36, 40, 41, 44, 50-52 and 57-67 are pending in the